

Claims

1. Diagnostic beads for the detection of occult blood in animal excreta, especially for use in an animal litter, comprising a particulate material and a detection composition attached to said particulate material, wherein the detection composition comprises a chromogen, a peroxide, an enhancer, a stabilizer, and a binder, said chromogen being selected to react with occult blood in the animal excreta so as to produce a visible and immediate color change when excreta containing blood comes into contact with said diagnostic beads.
2. Diagnostic beads according to claim 1, wherein the particulate material comprises a cat litter- absorbent material.
3. Diagnostic beads according to claim 1, wherein the particulate material comprises a material having the shape and size of the cat litter material.
4. Diagnostic beads according to claim 1, wherein the particulate material is selected from the group consisting of: wood-based beads, wood-based beads coated with titanium dioxide, wood-based beads coated with calcium carbonate, wood-based beads coated with starch, silica gel beads, quartz beads, polystyrene beads, alumino silicates, clay and cellulose beads.
5. Diagnostic beads according to claim 1, wherein the chromogen is 3,3 5,5-tetramethylbenzidine.
6. Diagnostic beads according to claim 1, wherein the enhancer is 6-methoxyquinoline.
7. Diagnostic beads according to claim 1, wherein the peroxide is cumene hydroperoxide.
8. Diagnostic beads according to claim 1, wherein the stabilizer is ascorbic acid.
9. Diagnostic beads according to claim 11, wherein the binder is a starch derivative.
10. Diagnostic beads according to claim 1, wherein the binder comprises an organic polymer capable of adhering to the particulate material.
11. Diagnostic beads according to claim 9, wherein the organic polymer material is selected from the group consisting of polyvinyl pyrrolidone, carboxymethyl cellulose, ethyl cellulose, and acrylic latex.
12. Diagnostic beads according to claim 1, further comprising at least one additional

binder and an inorganic filler.

13. Diagnostic beads according to claim 11, wherein the organic filler is selected from at least one of calcium carbonate and alumina.
14. Diagnostic beads according to claim 1, further comprising at least one additive.
15. Diagnostic beads according to claim 14, wherein the additive is selected from the group consisting of wetting agents or metal ion sequestrants.
16. An animal litter for the detection of blood in animal excreta comprising diagnostic beads, as defined in any one of claims 1 – 15.
17. An animal litter according to claim 16, comprising 1-100% diagnostic beads.
18. An animal litter according to claim 16, comprising 5-10% diagnostic beads.
19. An animal litter according to claim 16, wherein the animal litter is a cat litter.
20. A method for producing diagnostic beads useful for the detection of occult blood in animal excreta, comprising producing a detection composition and applying said detection composition to a particulate material, wherein the detection composition comprises a chromogen, a peroxide, an enhancer, a stabilizer, and a binder, said chromogen being selected to react to occult blood in animal excreta so as to produce a visible color change when excreta containing blood comes into contact with said diagnostic beads.
21. A method according to claim 20, wherein the particulate material comprises a cat litter- absorbent material.
22. A method according to claim 20, wherein the particulate material comprises a material having the shape and size of the cat litter material.
23. A method according to claim 20, wherein the particulate material is selected from the group consisting of: wood-based beads, wood-based beads coated with titanium dioxide, wood-based beads coated with calcium carbonate, silica gel beads, quartz beads, polystyrene beads, aluminosilicates, clay and cellulose beads.
24. A method according to claim 20, wherein the chromogen is 3,3',5,5'-tetramethylbenzidine.
25. A method according to claim 20, wherein the enhancer is 6-methoxyquinoline.
26. A method according to claim 20, wherein the peroxide is cumene hydroperoxide.
27. A method according to claim 20, wherein the stabilizer is ascorbic acid.

28. A method according to claim 20, wherein the binder comprises a starch derivative.
29. A method according to claim 20, wherein the binder comprises an organic polymer capable of adhering to the particulate material.
30. A method according to claim 29, wherein the organic polymer material is selected from the group consisting of polyvinyl pyrrolidone, carboxymethyl cellulose, ethyl cellulose, and acrylic latex.
31. A method according to claim 20, wherein the detection composition is applied to the particulate material as a dry powder.
32. A method according to claim 20, wherein the detection composition is applied to the particulate material as a liquid spray.
33. A method according to claim 20, wherein the step of applying the detection composition comprises combining said detection composition with a binder and a filler to produce a powder, moistening the particulate material, and coating said particulate material with said powder.
34. A method according to claim 33, wherein the binder comprises a starch derivative and the filler is comprised of alumina and calcium carbonate.
35. A method according to claim 33, wherein the binder further comprises carboxymethyl cellulose.
36. A method according to claim 20, wherein the step of applying the detection composition comprises dissolving said detection composition in an alcohol and sodium hydroxide solution and spraying the resultant solution onto said particulate material.
37. A method according to claim 20, wherein the diagnostic beads further comprises at least one additive.
38. A method according to claim 37, wherein the additive is selected from the group consisting of wetting agents or metal ion sequestrants.
39. A method for producing diagnostic beads useful for the detection of occult blood in animal excreta, comprising producing a detection composition, combining said detection solution with a particulate material and at least one binder, and producing diagnostic beads through a granulation process, wherein the detection composition comprises a chromogen, a peroxide, an enhancer, a stabilizer, and a binder, said

chromogen being selected to react to occult blood in animal excreta so as to produce a visible color change when excreta containing blood comes into contact with said diagnostic beads.

40. A method according to claim 39, wherein the particulate material is selected from the group consisting of: wood-based beads, wood-based beads coated with titanium dioxide, wood-based beads coated with calcium carbonate, wood-based beads coated with starch, silica gel beads, quartz beads, polystyrene beads, alumino silicates, clay and cellulose beads.

41. A method according to claim 39, wherein the particulate material comprises a cat litter- absorbent material.

42. A method according to claim 39, wherein the particulate material comprises a material having the shape and size of the cat litter material.

43. A method according to claim 39, wherein the chromogen is 3,3',5,5'-tetramethylbenzidine.

44. A method according to claim 39, wherein the enhancer is 6-methoxyquinoline.

45. A method according to claim 39, wherein the peroxide is cumene hydroperoxide.

46. A method according to claim 39, wherein the stabilizer is ascorbic acid.

47. A method according to claim 39, wherein the binder comprises an organic polymer capable of adhering to the particulate material.

48. A method according to claim 47, wherein the organic polymer material is selected from the group consisting of polyvinyl pyrrolidone, carboxymethyl cellulose, ethyl cellulose, and acrylic latex.

49. A method according to claim 39, wherein the diagnostic beads further comprise at least one additive.

50. A method according to claim 49, wherein the additive is selected from the group consisting of wetting agents or metal ion sequestrants.